

a). Amendments to the Claims

1. (Currently Amended) A process for producing guanosine diphospho-sugar ("GDP-sugar") or uridine diphospho-sugar ("UDP-sugar"), which comprises:

selecting, as enzyme sources, a) a culture ~~broth~~ of a microorganism capable of producing guanosine-5'-triphosphate ("GTP") or ~~uridine-5'-triphosphate~~ uridine-5'-triphosphate ("UTP") from a nucleotide precursor, or a treated product of the culture ~~broth~~ selected from the group consisting of a concentrated product of the culture ~~broth~~, a dried product of the culture ~~broth~~, a culture supernatant obtained by centrifuging the culture ~~broth~~, a concentrated product of the culture supernatant, an enzyme preparation obtained from the culture supernatant, cells obtained by centrifuging the culture ~~broth~~, a dried product of the cells, a freeze-dried product of the cells, a surfactant-treated product of the cells, an ultrasonic-treated product of the cells, a mechanically disrupted product of the cells, a solvent-treated product of the cells, an enzyme-treated product of the cells, a protein fraction of the cells, an immobilized product of the cells and an enzyme preparation obtained by extraction from the cells, and b) a culture ~~broth~~ or ~~culture-broths~~ cultures of at least one strain of microorganism having genes responsible for production of GDP-sugar or UDP-sugar from a sugar selected from the group consisting of glucose, fructose, galactose, glucosamine, N-acetylglucosamine, N-acetylgalactosamine, ~~mannose, fucose and N-acetylmannosamine~~ mannose and fucose and GTP or UTP, or a treated product of the culture ~~broth~~ selected from the group consisting of a concentrated product of the culture ~~broth~~, a dried product of the culture ~~broth~~, a culture supernatant obtained by centrifuging the culture, ~~culture broth, a concentrated product of the culture supernatant, an enzyme preparation obtained from the culture supernatant,~~ cells obtained by centrifuging the culture

~~broth~~, a dried product of the cells, a freeze-dried product of the cells, a surfactant-treated product of the cells, a solvent-treated product of the cells, ~~a protein fraction of the cells, and an~~ immobilized product of the cells ~~and an enzyme preparation obtained by extraction from the~~ cells wherein the treated product of the culture continues to have the same enzymatic activity as said culture capable of producing UDP-sugar or GDP-sugar from the sugar and UTP or GTP;

allowing the enzyme sources, the nucleotide precursor and the sugar to be present in an aqueous medium to form and accumulate GDP-sugar or UDP-sugar in the aqueous medium; and

recovering GDP-sugar or UDP-sugar from the aqueous medium.

Claims 2-4. (Cancelled)

5. (Previously Presented) The process according to claim 1, wherein the nucleotide precursor is orotic acid, uracil, orotidine, uridine, cytosine, cytidine, adenine, adenosine, guanine, guanosine, hypoxanthine, inosine, xanthine, xanthosine, inosine-5'-monophosphate, xanthosine-5'-monophosphate, guanosine-5'-monophosphate, uridine-5'-monophosphate or cytidine-5'-monophosphate.

Claims 6-14. (Cancelled)

15. (Previously Presented) The process according to claim 1, wherein the microorganism capable of producing GTP or UTP from a nucleotide precursor is a microorganism selected from microorganisms belonging to the genus *Corynebacterium*.

16. (Original) The process according to claim 15, wherein the microorganism belonging to the genus *Corynebacterium* belongs to *Corynebacterium ammoniagenes*.

Claim 17. (Cancelled)

18. (Previously Presented) The process according to claim 72, wherein the recombinant microorganism is selected from microorganisms belonging to the genus *Escherichia* and the genus *Corynebacterium*.

19. (Previously Presented) The process according to claim 18, wherein the recombinant microorganism is *Escherichia coli*.

20. (Previously Presented) The process according to claim 18, wherein the recombinant microorganism is *Corynebacterium ammoniagenes*.

Claims 21-71. (Cancelled)

72. (Previously Presented) The process according to claim 1, wherein the at least one strain of microorganism having genes responsible for production of a sugar nucleotide comprises a recombinant microorganism having at least one gene responsible for production of a

sugar nucleotide, said gene being derived from a different microorganism, or being derived from said strain of microorganism but being harbored in a plasmid.